

# Fishfinder 160C®

*color sonar*

*owner's manual*



© Copyright 2006 Garmin Ltd. or its subsidiaries

Garmin International, Inc.  
1200 East 151<sup>st</sup> Street,  
Olathe, Kansas 66062, USA  
Tel. 913/397.8200 or 800/800.1020  
Fax 913/397.8282

Garmin (Europe) Ltd.  
Unit 5, The Quadrangle, Abbey Park Industrial Estate,  
Romsey, SO51 9DL, UK  
Tel. +44 (0) 870.8501241 (outside the UK)  
0808 2380000 (UK only)  
Fax 44/0870.8501251

Garmin Corporation  
No. 68, Jangshu 2<sup>nd</sup> Road, Shijr, Taipei County,  
Taiwan  
Tel. 886/2.2642.9199  
Fax 886/2.2642.9099

All rights reserved. Except as expressly provided herein, no part of this manual may be reproduced, copied, transmitted, disseminated, downloaded or stored in any storage medium, for any purpose without the express prior written consent of Garmin. Garmin hereby grants permission to download a single copy of this manual onto a hard drive or other electronic storage medium to be viewed and to print one copy of this manual or of any revision hereto, provided that such electronic or printed copy of this manual must contain the complete text of this copyright notice and provided further that any unauthorized commercial distribution of this manual or any revision hereto is strictly prohibited.



Information in this document is subject to change without notice. Garmin reserves the right to change or improve its products and to make changes in the content without obligation to notify any person or organization of such changes or improvements. Visit the Garmin Web site ([www.garmin.com](http://www.garmin.com)) for current updates and supplemental information concerning the use and operation of this and other Garmin products.

Garmin See-Thru<sup>®</sup>, and Ultrascroll<sup>™</sup> are trademarks or registered trademarks of Garmin Ltd. or its subsidiaries and may not be used without the express permission of Garmin.

## INTRODUCTION

Thank you for choosing the Garmin® Fishfinder 160C. The Fishfinder 160C is a color sonar that offers many features, including the following:

- Ultrascroll™, which gives you a much faster update rate on your Sonar Pages.
- Auto Gain, which allows you to see more fish and structures.
- Whiteline, which helps you to interpret bottom hardness.
- 2x and 4x manual zoom.
- Adjustable keel offset.
- Alarms for shallow water, deep water, low battery, and suspended target detection.
- NMEA sonar data output.

## About This Manual

This manual covers the installation and operation of the Fishfinder 160C. To get the most out of your new Fishfinder, take time to read this manual and learn the operating procedures for your unit in detail.

The **Introduction** contains information about this manual and the Table of Contents.

The **Getting Started** section contains general information about your Fishfinder and sonar.

The **Installation Instructions** contain the information needed to properly install and care for the Fishfinder 160C.

The **Operating Instructions** contain information about the operation of the Fishfinder 160C.

The **Appendix** contains information such as specifications, license requirements and warranty information.

The **Index** helps you find information quickly.

# TABLE OF CONTENTS

<b>Introduction.....</b>	<b>i</b>
<b>About This Manual .....</b>	<b>i</b>
<b>Product Registration .....</b>	<b>iii</b>
Contact Garmin.....	iii
<b>Caring for the Fishfinder 160C.....</b>	<b>iii</b>
Caring for the Screen.....	iii
<b>Warnings .....</b>	<b>iv</b>
<b>Important Information .....</b>	<b>iv</b>
<b>Getting Started.....</b>	<b>1</b>
<b>Understanding the Fishfinder and Sonar.....</b>	<b>1</b>
Understanding Sonar .....	1
Understanding the Fishfinder Screen.....	1
Using Dual Beam.....	2
Whiteline .....	3
Thermoclines .....	3
<b>Installing the Fishfinder 160C .....</b>	<b>4</b>
<b>Packing List .....</b>	<b>4</b>
<b>Unit Installation .....</b>	<b>5</b>
<b>Transducer Installation .....</b>	<b>6</b>
Selecting a Transom Mount Location.....	7
Mounting the Transducer on a Transom.....	8
Mounting the Transducer on a Trolling Motor .....	9
Testing the Transom Mount Installation.....	10
<b>Installing the Wiring Harness.....</b>	<b>10</b>

<b>Using the Fishfinder 160C .....</b>	<b>12</b>
<b>Simulator Mode .....</b>	<b>12</b>
<b>The Keypad .....</b>	<b>12</b>
<b>The Fishfinder 160C Display .....</b>	<b>13</b>
<b>The Adjustment Bar .....</b>	<b>14</b>
Range .....	14
Gain .....	14
Scroll.....	14
Zoom.....	15
View.....	15
<b>The Setup Menu.....</b>	<b>15</b>
Alarms .....	15
Graph .....	16
Numbers.....	18
Units.....	20
System .....	20
<b>Appendix .....</b>	<b>22</b>
<b>Specifications .....</b>	<b>22</b>
Physical Specifications .....	22
Power .....	22
Sonar.....	22
<b>Limited Warranty .....</b>	<b>23</b>
<b>Software License Agreement .....</b>	<b>24</b>
<b>Declaration of Conformity (DoC) .....</b>	<b>24</b>
<b>Index .....</b>	<b>25</b>

## Product Registration

Help us better support you by completing our online registration today! Connect to our Web site at [www.garmin.com/registration/](http://www.garmin.com/registration/).

Use this area to record the serial number (8-digit number located on the back of the Fishfinder 160C) in case your Fishfinder 160C needs service. Keep the original sales receipt, or a photocopy, in a safe place.

Serial Number: \_\_\_\_ \_

## Contact Garmin

Contact Garmin if you have any questions while using your Fishfinder 160C. In the USA contact Garmin Product Support by phone: (913) 397-8200 or (800) 800-1020, Monday–Friday, 8 AM–5 PM Central Time; or go to [www.garmin.com/support/](http://www.garmin.com/support/), and click **Product Support**.

In Europe, contact Garmin (Europe) Ltd. at +44 (0) 870.8501241 (outside the UK) or 0808 2380000 (within the UK).

## Tell Us What You Think

Tell us how you like this manual! Fill out the Product Documentation Survey. Go to [www.garmin.com/contactUs/](http://www.garmin.com/contactUs/), and click **Product Documentation Survey**.

## Caring for the Fishfinder 160C

The Fishfinder 160C's case is constructed of high-quality materials and does not require user maintenance except cleaning.

### Caring for the Screen

The Fishfinder 160C's lens is coated with a special anti-reflective coating that is sensitive to skin oils, waxes and abrasive cleaners. Cleaners containing ammonia, alcohol, abrasives, or anti-grease detergents will harm the anti-reflective coating. It is important to clean the lens using an eyeglass lens cleaner (that is specified as safe for anti-reflective coatings) and a clean, lint-free cloth.

### Cleaning the Case

Clean the unit's outer casing (except for the screen) using a cloth dampened with a mild detergent solution, and then wipe dry. Avoid chemical cleaners and solvents that may damage plastic components.

### Water Immersion

The Fishfinder 160C is waterproof to IEC Standard 60529 IPX7. It can withstand immersion in 1 meter of water for 30 minutes. Prolonged submersion can cause damage to the unit. After submersion, be certain to wipe and air dry the unit before reuse.

### Storage

Do not store the Fishfinder 160C where prolonged exposure to temperature extremes may occur (such as in the trunk of a car) because permanent damage may result.



## Warnings

**WARNING:** This product, its packaging, and its components contain chemicals known to the State of California to cause cancer, birth defects, or reproductive harm. This Notice is being provided in accordance with California's Proposition 65. If you have any questions or would like additional information, please refer to our Web site at <http://www.garmin.com/prop65>.



**- LAMP(S) INSIDE THIS PRODUCT MAY CONTAIN MERCURY AND MUST BE RECYCLED OR DISPOSED OF ACCORDING TO LOCAL, STATE, OR FEDERAL LAWS.**

## Important Information

**The California Electronic Waste Recycling Act of 2003** requires the recycling of certain electronics. For more information on the applicability to this product, see [www.ecycle.org](http://www.ecycle.org).

## GETTING STARTED

### Understanding the Fishfinder and Sonar

The Fishfinder 160C is a fully automatic, color sonar unit that allows you to go out on the water and find fish without having to configure a lot of settings. However, you can customize each setting as you prefer.

If you have used a Fishfinder before, you might already know how to interpret the sonar information on the screen, so you can skip this section. If you have not used a Fishfinder before, you might want to learn a bit about sonar: what it is, how it works, and what you might see on the Fishfinder 160C screen. This manual provides a general understanding of those things that you need to know about sonar that can help you interpret the screen and find the fish.

#### ***Understanding Sonar***

During installation, you connect your Fishfinder 160C to a transducer. The transducer uses sound to determine information about what is in the water beneath your boat. Then the transducer sends the information to your Fishfinder to be shown on the screen for you to view and interpret.

The transducer sends sound waves down into the water in a cone shape, similar to a flashlight beam (covering a smaller circular area at the top and angling out to a larger circular area at the bottom).

These sound waves reflect off of any object that they hit, and then the waves travel back up to the transducer. These objects could be fish, branches, the bottom, or any other object that has density that is different from the water. The transducer receives the sound wave information, and then sends the information to the Fishfinder. The Fishfinder shows the information on the screen for you to see and interpret. The type of transducer and settings that you choose determine how the information appears on the screen.

#### ***Understanding the Fishfinder Screen***

Experimentation and experience are the keys to successfully interpreting your Fishfinder screen. We recommend that you take your Fishfinder out on familiar water, and spend time learning to interpret what you see on the Fishfinder 160C screen.

Think of the Fishfinder screen as if you took a picture from the side of an aquarium in your home. You can see how deep a fish is in the water (how close it is to the top or bottom), but you cannot tell where the fish is located horizontally in the water (whether it is near the front or the back of the aquarium). Remember this when you are trying to locate exactly where something is in the water.

The strongest sonar returns appear on your screen as the most intense solid red. The weaker returns appear as less intense, less solid colors, with dark blue to black being the weakest.

The bottom of the water is always going to be the strongest signal, and therefore the bottom is the continuous, intense red line running across the bottom of the screen. The Fishfinder 160C includes the latest technology in interpreting bottom signals; it can see through fish, structures, and thermoclines (see [page 3](#)). Even so, large schools of fish or dense structures close to the bottom can affect water depth return readings.

Along the top of the screen, you might see a grouping of intense colors. This area is surface clutter, which can be caused by waves or any other sonar interference at the surface of the water. Too much surface clutter can obscure your view of fish. You can turn down the Gain setting to reduce this surface clutter.

Between the bottom and the surface clutter, you may see suspended targets. By default, the targets appear as arches.



---

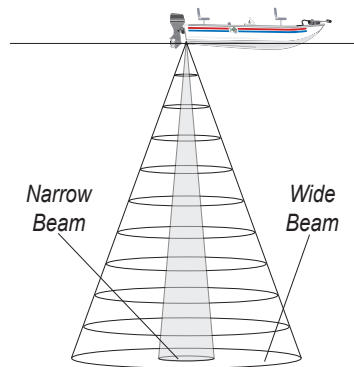
**NOTE:** Suspended target returns might not always appear as perfect arches, due to the speed, fish orientation, or other conditions.

---

You can turn on the Fish Symbols setting if you want to see suspended targets indicated by fish shapes instead of arches.

## Using Dual Beam

A dual beam transducer can transmit a narrow or a wide beam. The water area covered by the transmitted sound waves is determined by the transducer beam width and the water depth. The narrow beam provides crisp detail of what is under your boat, and is very helpful if you are fishing in deeper water where the beam covers more area (for example, at a depth of 30 feet, the narrow beam covers the area of about a 7-foot circle).



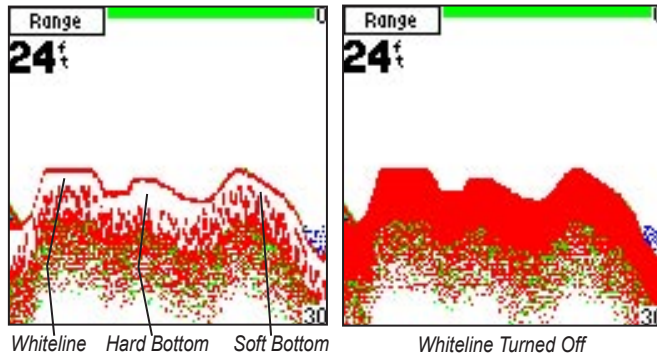
The wide beam is more helpful in shallow water, because it gives you a much wider view of objects in the water, including areas beyond the sides of your boat. At a depth of 30 feet, the wide beam covers the area of approximately a 20-foot circle.



## Whiteline

The Fishfinder 160C can help you to determine if the bottom is hard or soft. When the sonar sound waves are reflected back by the bottom, a hard bottom returns a stronger signal than a soft bottom. A thin whiteline indicates a softer bottom while a thick whiteline indicates a harder bottom. Normally, a red line shows the point where water meets the bottom. This line follows the bottom contour, along with any significant objects lying on the bottom. The unit uses the whiteline function to make the bottom layer information easier to distinguish.

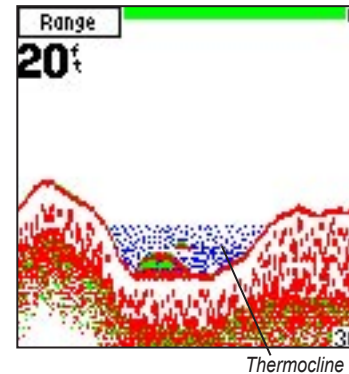
With the Fishfinder 160C, active whiteline helps accentuate where strong signals are located, which makes bottom type determination easier. The example below shows the bottom return with and without the whiteline activated.



## Thermoclines

Garmin's See-Thru technology allows the Fishfinder 160C to "see" through thermoclines and helps locate fish where they live; and fish love thermoclines!

A rough definition of a thermocline is a break in water where the water temperature changes faster than the water above it.



## INSTALLING THE FISHFINDER 160C

Read these instructions before attempting installation. Make sure you completely understand these instructions before you begin. When in doubt, seek professional assistance.

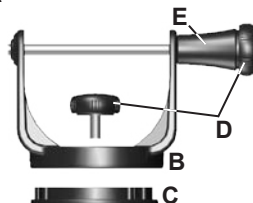
Be sure the wiring harness reaches the unit and transducer location before beginning installation. The Garmin Fishfinder 160C hardware allows for installation on either the transom or trolling motor. Check the packing list below. If you are missing any items, contact your Garmin dealer.

### Packing List

A–Fishfinder 160C Sonar Unit (1)	K–10-32 Lock Nut (1)
B–Swivel Mount Bracket (1)	L–5 x 30 mm Screws (2)
C–Swivel Base (1)	M–10-32 x 1.75 Screw (1)
D–Mounting Knobs- Short, Long (1ea)	N–1/4" Cable Clamps (2)
E–Mounting Knob Spacer (1)	O–Plastic Spacer (1)
F–Transducer With Power Cable (1)	P–1/4" Rubber Washer (1)
G–Transducer Mount (1)	Q–Cable Tie, 5.6" (4)
H–Trolling Motor Mount Gasket (1)	R–Cable Tie, 20" (1)
I–5 mm Flat Washers (2)	S–Power/Data Cable
J–4 x 12 mm Screws (4)	(not shown)



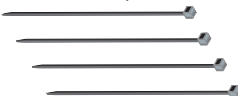
A



(Cable not shown)



Q



R



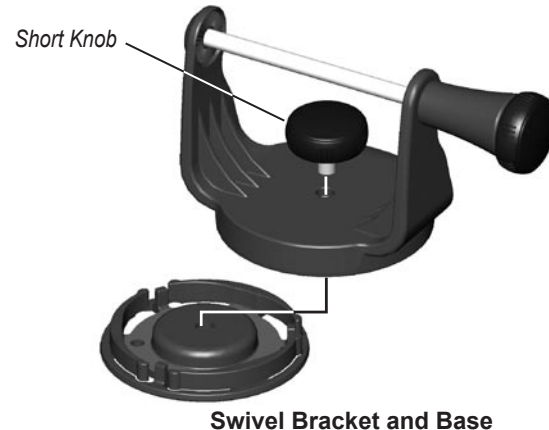
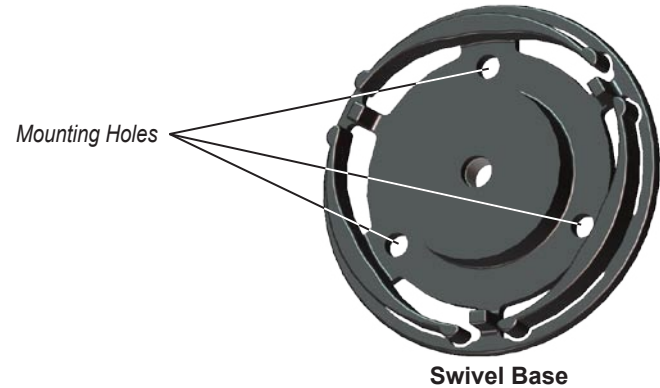
## Unit Installation

Choose a location that provides optimal viewing and allows easy access to the unit's keypad. Select a mounting surface strong enough to support the weight of the unit and protect it from excessive vibration or shock. **DO NOT** mount the bracket in a location where the unit is exposed to extreme temperature conditions. When installing the mounting bracket, be sure to allow room for the connection and routing of the power cable.

**Tool List (not included)**—drill, screwdriver (Phillips or standard), three #8 pan-head machine bolts with matching nuts and washers, and a 5/32" drill bit, OR three #8 pan head self-tapping screws, and a 1/16" drill bit.

### To mount the bracket assembly:

1. Using the swivel base as a template, mark the location of the three mounting holes.
2. If securing the base with machine bolts, drill three 5/32" holes at the locations you marked. If securing the base using self-tapping screws, drill 1/16" starter holes at the locations you marked. Generally, starter holes should be no deeper than half the screw length.
3. Secure the swivel base with three bolts or screws. **DO NOT OVERTIGHTEN.**
4. Attach the swivel bracket and secure it with the short knob.



### To install the unit on the mounting bracket:

1. Align the slot on the back of the unit with the long mounting knob and slide into place. It may be necessary to adjust the long knob to spread the bracket arms apart. (Turn counter-clockwise to widen the bracket arms, clockwise to tighten.)
2. Adjust the unit angle and tighten the long mounting knob until snug.
3. Tilt the unit by loosening the long knob on the right side of the bracket assembly.
4. Rotate the entire bracket by twisting it left or right. (**NOTE:** You will hear clicks as you turn the bracket.)
5. Tighten all knobs when the viewing angle you want is obtained.

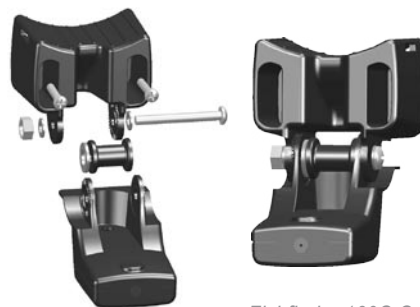


### Transducer Installation

Once you've installed the Fishfinder 160C unit, you must install the transducer for it to function. The included transducer can be installed on the transom (see [page 7](#)) or on the trolling motor (see [page 9](#)).

#### To assemble the transducer:

1. Insert the rubber washer and plastic spacer in the transducer at the same time. DO NOT lubricate the rubber washer.
2. Route the cable toward the back and slide the transducer into the mounting bracket.
3. Place a 5 mm flat washer on the 10-32 x 1.75" screw and insert the screw through the mounting bracket, spacer, and rubber washer.
4. Place the remaining 5 mm flat washer on the exposed end, and install the 10-32 lock nut finger tight. The transducer is tightened further after installation on the boat.



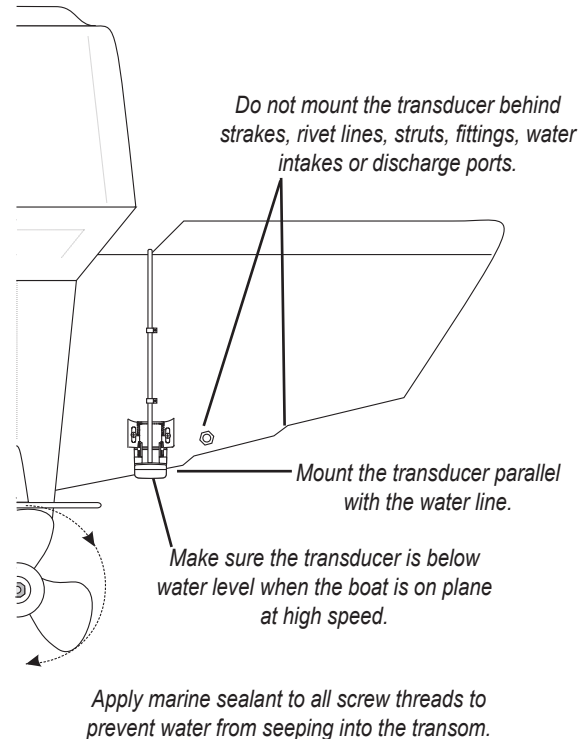
### Selecting a Transom Mount Location

For your sonar to operate properly, the transducer has to be located in clean (non-turbulent) water. The transducer should be mounted as near the center of the boat as possible.

DO NOT cut the transducer lead, this will void your warranty and may degrade the sonar's operation.

DO NOT mount the transducer behind strakes, rivet lines, struts, fittings, water intake, discharge ports, eroding paint, or anything that creates air bubbles or causes the water to become turbulent. It is important that the transducer be as close to the center line as possible in calm, non-turbulent water for optimal performance. Avoid mounting the transducer in locations where the boat may be supported during launching, hauling, trailering, or storage.

Mount the transducer away from the path of the prop on single drive boats. On twin drive boats, mount the transducer between the drives if possible. Do not mount the transducer directly in the path of the prop. The transducer can cause cavitation that may degrade the boat's performance and damage the prop.



## Mounting the Transducer on a Transom

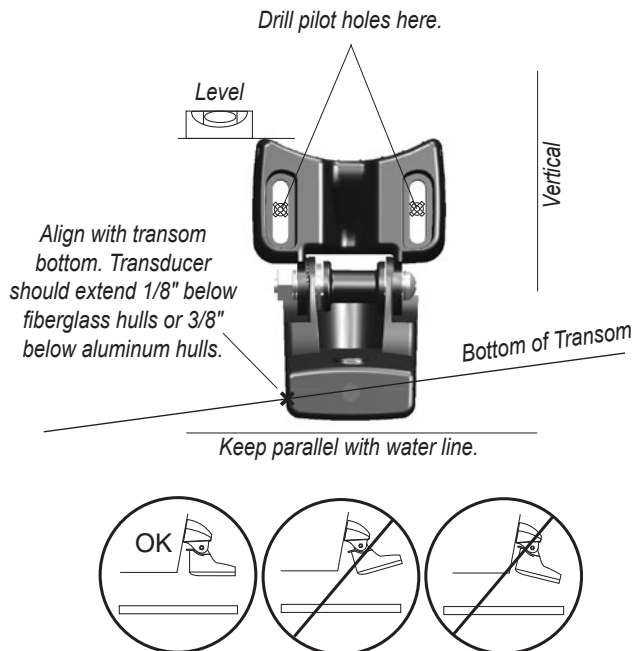
**Tool List (not included)**—drill, 3/8" wrench or socket, 5/32" and 1/8" drill bits, masking tape, #2 Phillips screwdriver, marine sealant.

### To mount the transducer on a transom:

1. Position the transom mount at the selected location, making sure the transducer is parallel with the water line. Mark the center locations of each hole on the transom mount (see figures to the right).
2. Using the 5/32" bit, drill the pilot holes approximately 1" (25 mm) deep at the marked locations. To avoid drilling the holes too deep wrap a piece of tape around the bit 1" from the point of the bit.
3. Apply marine sealant to the 5 x 30 mm screws. Attach the transducer to the transom using the 5 x 30 mm screws. Adjust the transducer to extend beyond the bottom of the transom approximately 1/8" (3 mm) on fiberglass hulls or 3/8" (10 mm) on aluminum hulls. Adjust the transducer to be aligned parallel with the water.
4. Tighten the 10-32 locking nut until it touches the mounting bracket, and then tighten 1/4 turn more (do not overtighten).



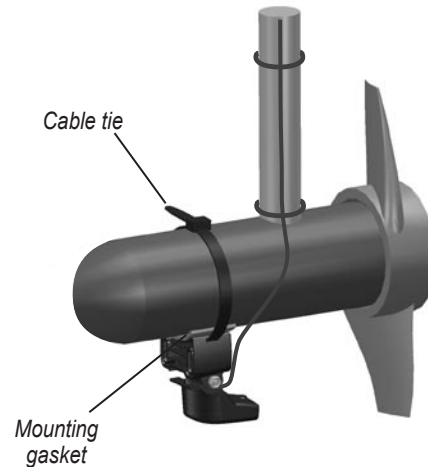
**NOTE:** After you install the transducer on a transom, it is highly recommended you test the installation (see [page 10](#))



## Mounting the Transducer on a Trolling Motor

### To mount the transducer on a trolling motor:

- Slide the large cable tie through the slot on the transducer mount with the ridges of the band facing up until equal lengths extend on both sides of the mount. (**NOTE:** For cold water, or heavy timber or debris areas, a metal 4-5" worm gear clamp is recommended.)
- Position the mount gasket on the curved top of the transducer mount.
- Place the transducer assembly against the motor body of the trolling motor, with the front of the transducer pointed away from the trolling motor propeller.
- Wrap the two ends of the cable tie around the motor body. Place the pointed end of the cable tie through the fastener hole on the opposite end and pull it through until it is snug but not tight. (The cable tie clicks when you pull it.)
- Position the transducer so that it is parallel with the bottom when in use, and make sure the gasket is aligned properly. Pull the cable tie end until tight. Trim off the excess, if necessary. Tighten the 10-32 locking nut until it touches the mounting bracket and then tighten 1/4 turn more. (Do not overtighten.)
- Route the 30' (9 m) transducer cable using the supplied cable ties to secure the cable to the motor shaft. You can fill the forward-facing portion (except the cable tie pocket) of the transducer mount with sealant to avoid accumulating debris.



## Testing the Transom Mount Installation

Perform this test after you install the Fishfinder. Because you need water to carry the sonar signal, the Fishfinder does not function properly with the transducer out of the water. When you place your boat in the water, check for leaks around the screw holes that are below the water line. DO NOT leave your boat in the water for an extended period of time without checking for leaks.

### To test the transom mount installation:

1. Begin testing the installation at a slow speed. If the sonar appears to be working properly, gradually increase the boat's speed observing the sonar's operation. If the sonar signal suddenly is lost or the bottom return is severely degraded, note the speed at which this occurs.
2. Return the boat to the speed at which the signal was lost. Make moderate turns in both directions and see if the signal improves.
3. If the signal strength improves while turning, adjust the transducer so that it extends another 1/8" below the transom of the boat. It might take several adjustments to eliminate the degradation.
4. If the signal does not improve it may be necessary to move the transducer to a different location.

## Installing the Wiring Harness

The Fishfinder 160C comes with a wiring harness that connects the unit to power and the transducer with one easy-to-remove connection. If it is necessary to extend the power wires, use 22 AWG wire. DO NOT cut the transducer cable, because this will void your warranty. Transducer extension cables are available from your Garmin Dealer.

If your boat has an electrical system, it may be possible to wire the unit directly to an unused holder on your current fuse block. If you are using the boat's fuse block, remove the in-line fuse supplied with the unit. You can also wire the unit directly to the battery.

### To install the wiring harness:

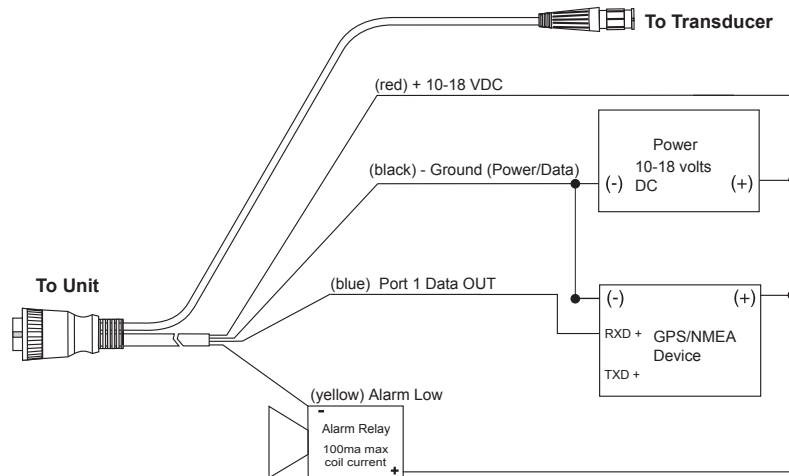
1. Install the Red (+) wire on the positive battery terminal.
2. Install the Black (-) wire on the negative battery terminal.
3. Install a 2 Amp fuse in the fuse holder (fuse block only).
4. Align the notches on the cable plug and back of the unit. Insert the cable into the connector and turn the lock ring counter-clockwise until it stops.

The Fishfinder 160C outputs NMEA data for: Water Depth, Water Speed and Water Temperature.

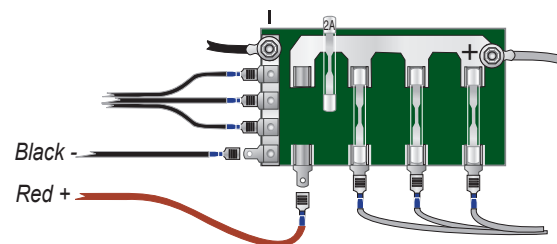
### To connect the NMEA output to a NMEA device:

Connect the Blue wire to the Data Input of the NMEA device.





**Wiring Diagram**



**Wiring to a Fuse Block**

## USING THE FISHFINDER 160C

If you are turning on your Fishfinder 160C for the first time, use the following procedure. If you have already turned on your Fishfinder, and you are just familiarizing yourself with the basic functions, please go to “Using the Keypad” on this page.

### To start your Fishfinder for the first time:

1. Press and hold the **Power/Backlight** key until the Fishfinder powers on. If the Fishfinder fails to turn on, verify that the wiring adapter is properly connected in the back of the Fishfinder, the Red and Black wires are connected to the correct polarity, and that the 2-Amp fuse is installed and not blown. If the Fishfinder does not detect a transducer, it automatically enters Simulator mode.

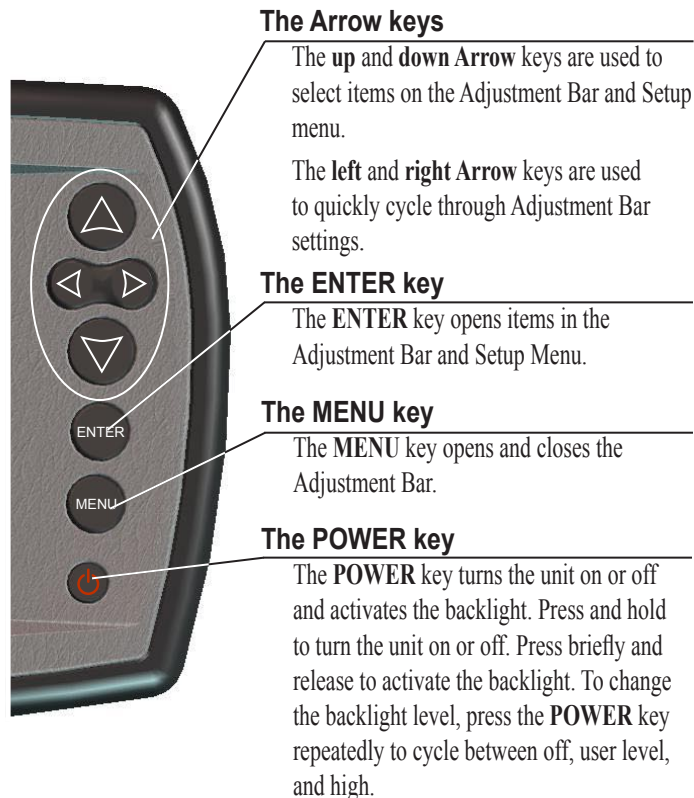
## Simulator Mode

You can use Simulator mode to practice and learn the operation of the Fishfinder. If the Fishfinder does not detect a transducer, it automatically starts in Simulator mode.

While in Simulator mode, the Fishfinder shows a bottom scene, and you can control the Fishfinder (except the Gain and Auto Gain options). If no keys are pressed for two minutes, the Fishfinder automatically resets to default settings while in Simulator mode.

To exit Simulator mode, turn off the Fishfinder.

## The Keypad



## The Fishfinder 160C Display

### Water Depth

The Depth Scale is shown from top to bottom along the right side. Messages and Alarm Icons appear along the bottom.

### Water Temperature

The unit can show the water temperature at the transducer.

### Speed

With a speed capable transducer, speed is shown in miles per hour, kilometers per hour, and knots.

### Distance

With a speed capable transducer, distance is shown in miles, nautical miles, or kilometers.

### Battery Voltage

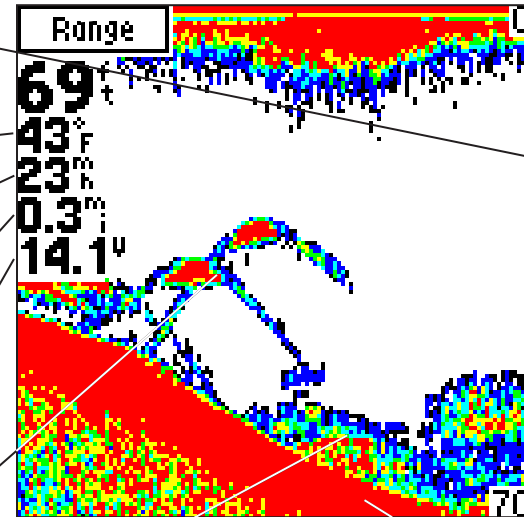
You can choose to show the current battery voltage (see [page 18](#)).

### Fish (Suspended Targets)

Suspended targets appear as arches or fish symbols (see [page 16](#)), and you can set an alert for when a target is detected

### Thermocline and Structure

Garmin's See-Thru® technology can show more than just the thermocline and structure, the unit finds targets in and below the thermocline, trees, brush, and deadfall.



(Simulated display)

### Bottom Shape and Type

Garmin's Auto Gain system provides a clear graphic representation of the bottom type and its shape.

## The Adjustment Bar

The Adjustment Bar allows quick access to the settings most commonly changed while using the unit. The Adjustment Bar settings are: Range, Gain, Scroll, Zoom, and View.

Press the **MENU** key to view the current Adjustment Bar settings. Press **MENU** again to hide the window. The current adjustment option always appears in the upper left of the display. Press **left** or **right** on the **Arrow** keys to scroll through the available options.

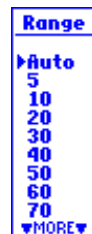
To immediately change the current adjustment option, press the **up** or **down Arrow** key. To review the available settings before making a change, press the **ENTER** key to activate the adjustment window.

### To change a setting on the unit:

1. Press **MENU**, use the **up** or **down Arrow** key.
2. Move the selection arrow to the option you want, and press **ENTER**.
3. Choose **Setup** for the main Setup Menu.

## Range

Sets the display depth range. The unit can automatically track the bottom, or be set to a user-specified range. Available settings are: **Auto** (default) or **5-900 ft**.



## Gain

Controls the sensitivity of the unit's sonar receiver. This provides some flexibility in what is seen on the display. To see more detail, increase the receiver sensitivity by selecting a higher gain (+). If there is too much detail or if the screen is cluttered, lowering the sensitivity (-) may increase the clarity of the display. Available settings are: **Auto** (default) and **0-100%**. The Auto setting level is controlled by the Auto Gain setting in the Setup menu.



## Scroll

Adjusts the rate that the graph scrolls from right to left. If you are sitting still or the graph is moving too fast, slowing or pausing the graph can be beneficial.



## Zoom

Selects a screen zoom scale. Available settings are: **OFF** (default), **2X**, and **4X** zoom.



## View

**View** is only available when a Zoom scale other than **Off** is selected. This setting allows you to select a specific zoom area to view on the screen, or allows the unit to automatically select a zoomed viewing area based on the bottom. When adjusting this setting, the top and bottom numbers reflect the zoomed view depth range.



## The Setup Menu

The Setup menu contains the settings that should not need to be changed frequently.

### To display the Setup menu:

1. Press the **MENU** key.
2. Using the **up** or **down Arrow** key, select **Setup**, and press the **ENTER** key.

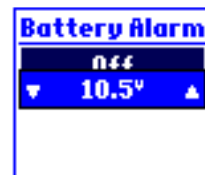
### To change a Setup menu item:

1. Using the **up** or **down Arrow** key, highlight the selection.
2. Press the **ENTER** key to activate the setting.
3. Using the **up** or **down Arrow** key, make the change.
4. Press the **ENTER** key to accept the change.

## Alarms

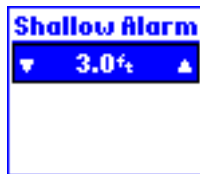
### Battery

Sounds an alarm when the battery has discharged to a user-determined voltage. The Battery Alarm can help determine when the battery is reaching a critical state of discharge.



## Shallow

The **Shallow** Alarm sounds a warning at a determined depth between **1** and **900** ft.



## Deep

The **Deep** Alarm sounds a warning at a determined depth between **1** and **900** ft.



## Fish Alarm

Sounds an alarm when the unit detects what it determines to be a fish. The alarm selections are: **Off** (default) or **On**.



## Graph

### Fish ID

The Fish ID setting determines how the graph shows underwater targets and background information. If **Fish ID** is set to **Off**, the unit shows all of the available information about the underwater environment. If a fish symbol is selected, the graph shows only the information related to that symbol (large, medium, and small sizes). In wide beam, targets detected toward the outside of the beam are indicated by a hollow fish symbol. Targets detected directly under the boat are indicated by a solid fish symbol.

**Off** (default) the Fishfinder does not interpret the sonar return data. Fish appear as arches

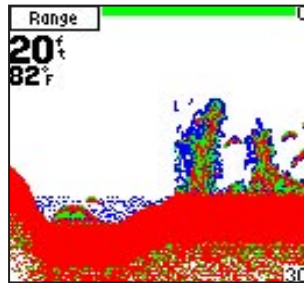
- Suspended targets appear as symbols. No background information appears
- Same as previous with the target depth shown.
- Suspended targets appear as symbols. Background information appears, making the distinction between fish and structure easier.
- Same as previous with target depth shown.

## Beam

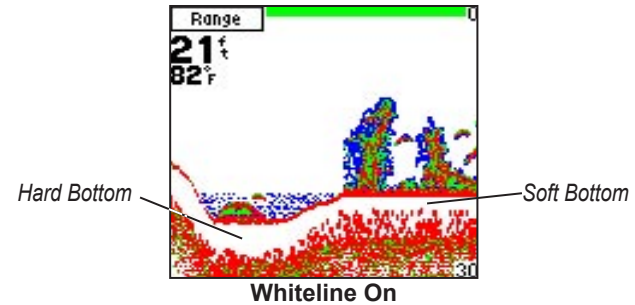
The Beam setting allows the selection of a Narrow Beam or Wide Beam for the transducer. A narrow beam provides higher detail structure returns of a smaller bottom area. The wide beam shows a larger fish return area with poorer detail of non-bottom structure.

## Whiteline

The Whiteline setting controls how the unit displays information about the bottom type (hard or soft). With Whiteline **off**, the bottom return displays as a solid color. With Whiteline **on**, the strongest area of bottom return becomes white and can be used to determine bottom hardness. A hard bottom returns a stronger signal and displays a thicker bottom layer. A soft bottom returns a weaker signal and displays a thinner bottom layer.



Whiteline Off



Whiteline On

## Auto Gain

The Auto Gain setting controls the sensitivity of the receiver when in the gain option is set to Auto. Auto Gain has three settings; **High**, **Medium**, and **Low**. Increasing the Auto Gain setting makes the Fishfinder 160C more aggressive when adjusting gain automatically. High auto gain may lead to excessive clutter on the screen.



## Background

Use this setting to change the Background color. The available settings are: **Black**, **Blue**, and **White**.



## Numbers

### Keel Offset

Use the Keel Offset setting to offset the surface reading for the depth of a keel. This makes it possible to measure depth from the bottom of your keel instead of from the transducer's location. Enter a positive number to offset for a keel. You can enter a negative number to compensate for a large vessel that may draw several feet of water.

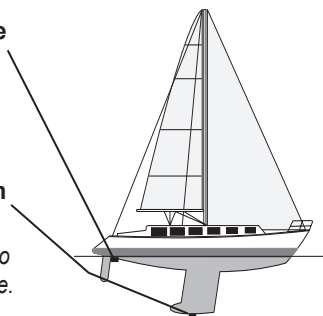


#### Transducer at Surface

*Enter (+) positive number to show depth from the bottom of keel.*

#### Transducer at Bottom of Keel

*Enter (-) negative number to show depth from the surface.*



## Size

Determines the size of the depth, battery, temperature, speed, and distance numbers shown on the screen, either **Small** or **Large** (default).



## Battery

Choose to either **Hide** (default) or **Show** the current battery voltage.



## Water Temp

Water Temperature automatically appears when set to **Auto** (default), or you can choose to **Hide** the Water Temperature.



## Speed

Speed automatically appears when set to **Auto** (default), or you can choose to **Hide** the Speed.



## Distance

Distance automatically appears when set to **Auto**, or you can choose to **Hide** (default) the Distance.





## Calibrate Speed

This only appears if you are using a speed-capable transducer.

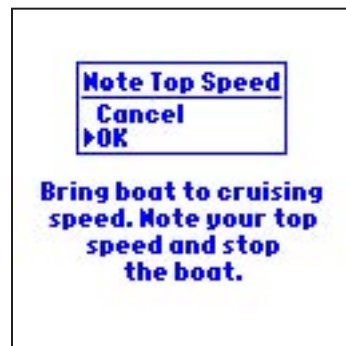
Calibration is required to ensure that the speed shown on your unit is accurate. Use the boat's speedometer, a stopwatch, or a GPS device to determine your speed. If using a stopwatch, measure the distance that the boat travels in a period of time (distance / time = speed). It is recommended that the calibration take place in water having little or no current.

### To calibrate the speed:

1. Highlight **Calibrate Speed**, and press the **ENTER** key.
2. Bring the boat to cruising speed, note the top speed, and then stop the boat.
3. With **OK** selected, press the **ENTER** key.
4. Using the **up** or **down Arrow** key, set the maximum speed, and press the **ENTER** key.



**NOTE:** If the boat is not moving fast enough or the speed sensor is not registering a speed, you will see **Speed Too Low** displayed in the selection box. With **OK** highlighted, press **ENTER** and check that the speed sensor wheel is moving or safely increase boat speed. If there is a problem with the speed sensor/unit, check the cable connections.



## Reset Distance

Reset Distance appears only if you are using a speed-capable transducer. Reset Distance resets the displayed Distance to zero.



## Units

### Depth

Choose to show measurements in **Feet** (ft, default), **Meters** (m) or **Fathoms** (fa).



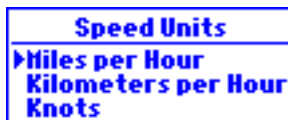
### Temperature

Choose to show the water temperature in **Fahrenheit** (°F, default) or **Celsius** (°C).



### Speed

Choose to show Speed in **Miles per Hour** (mph, default), **Kilometers per Hour** (kph), or **Knots** (kt).



### Distance

Choose to show Distance in **Miles** (mi, default), **Nautical Miles** (nm), or **Kilometers** (km).



## System

### Simulator

The Fishfinder 160C comes with a built-in Simulator mode that allows you to practice and learn the operation of the unit at home rather than on the water. The unit indicates that it is running the Simulator mode by showing **Simulator** in the lower-left of the screen. While in the simulator mode, the unit displays a simulated bottom scene, and the Fishfinder 160C can be controlled (except Gain) just as if it were on the water. To exit Simulator mode, turn the unit off. If no keys are pressed for 1 minute, the unit automatically resets while in Simulator mode. At startup if a transducer is not detected, the unit automatically starts in Simulator mode.

### Language

Choose to display information in one of four languages.



## NMEA Output

Choose to turn the NMEA Output **On** or **Off** (default). The Fishfinder 160C can output NMEA data for Water Depth, Water Temperature, and Water Speed. The NMEA output is NMEA 0183 version 3.01.



## Beeper

Choose to turn the Beeper **On** or **Off**. When the Beeper is **On**, a beep is sounded when a key is pressed, a message is shown or an alarm activated. With the Beeper **Off**, all Beeper functions are muted.



## Contrast

Adjust to compensate for different light levels or viewing angles. Moving the slider up darkens the contrast. Moving the slider down lightens the contrast.



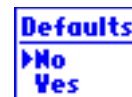
## Light

Changes the level of screen backlighting. This setting affects the middle level (user level) when cycling through the Backlight setting. To cycle through the Backlight settings, press and release the **POWER** key.



## Defaults

This option restores the factory default settings for the unit.



## APPENDIX

### Specifications

#### **Physical Specifications**

**Size:** 4.9" H x 6.1" W x 2.9" D (12.4 cm x 15.5 cm x 7.4 cm)

**Weight:** 1.1 lbs. (0.5 kg)

**Display:** 4.4" diagonal (11.3 cm), 3.14" H x 3.14" W (8.0 cm x 8.0 cm) high-contrast, 16-color CSTN display with adjustable brightness (128 x 128 pixels)

**Case:** Fully gasketed, high-impact plastic alloy, waterproof to IEC 529 IPX7 standards

**Temp. Range:** 5°F to 130°F (-15°C to 55°C)

#### **Power**

**Source:** 10-18v DC

**Usage:** 9 watts max. at 18V DC; 7 watts at 12V DC nominal.

**Fuse:** AGC/2A - 2.0 Amp

### **Sonar**

**Power:** Dual Beam: 150 watts (RMS); 1200 watts (peak to peak)

**Frequency:** 200 kHz/80kHz

**Depth:** 900 foot max depth (Depth capacity is dependent on water salinity, bottom type, and other water conditions.)

## Limited Warranty

This Garmin product is warranted to be free from defects in materials or workmanship for one year from the date of purchase. Within this period, Garmin will, at its sole option, repair or replace any components that fail in normal use. Such repairs or replacement will be made at no charge to the customer for parts or labor, provided that the customer shall be responsible for any transportation cost. This warranty does not cover failures due to abuse, misuse, accident, or unauthorized alteration or repairs.

THE WARRANTIES AND REMEDIES CONTAINED HEREIN ARE EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES EXPRESS, IMPLIED, OR STATUTORY, INCLUDING ANY LIABILITY ARISING UNDER ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, STATUTORY OR OTHERWISE. THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, WHICH MAY VARY FROM STATE TO STATE.

IN NO EVENT SHALL GARMIN BE LIABLE FOR ANY INCIDENTAL, SPECIAL, INDIRECT, OR CONSEQUENTIAL DAMAGES, WHETHER RESULTING FROM THE USE, MISUSE, OR INABILITY TO USE THIS PRODUCT OR FROM DEFECTS IN THE PRODUCT. Some states do not allow the exclusion of incidental or consequential damages, so the above limitations may not apply to you. Garmin retains the exclusive right to repair or replace the unit or software or offer a full refund of the purchase price at its sole discretion. SUCH REMEDY SHALL BE YOUR SOLE AND EXCLUSIVE REMEDY FOR ANY BREACH OF WARRANTY.

To obtain warranty service, contact your local Garmin authorized dealer or call Garmin Product Support for shipping instructions and an RMA tracking number. Securely pack the unit and a copy of the original sales receipt, which is required as the proof of purchase for warranty repairs. Write the tracking

number clearly on the outside of the package. Send the unit, freight charges prepaid, to any Garmin warranty service station.

**Online Auction Purchases:** Products sold through online auctions are not eligible for rebates or other special offers from Garmin. Online auction confirmations are not accepted for warranty verification. To obtain warranty service, an original or copy of the sales receipt from the original retailer is required. Garmin will not replace missing components from any package purchased through an online auction.

**International Purchases:** A separate warranty is provided by international distributors for units purchased outside the United States. This warranty is provided by the local in-country distributor and this distributor provides local service for your unit. Distributor warranties are only valid in the area of intended distribution. Units purchased in the United States or Canada must be returned to the Garmin service center in the United Kingdom, the United States, Canada, or Taiwan for service.

Garmin International, Inc.  
1200 East 151st Street,  
Olathe, Kansas 66062, USA  
Tel. (913) 397-8200 or  
(800) 800-1020  
UK) Fax (913) 397-8282

Garmin (Europe) Ltd.  
Unit 5, The Quadrangle,  
Abbey Park Industrial Estate,  
Romsey, SO51 9DL, UK  
Tel. +44 (0) 870.8501241 (outside the  
0808.2380000 (within the UK)  
Fax +44 (0) 870.8501251

Garmin Corporation  
No. 68, Jangshu 2nd Road,  
Shijr, Taipei County, Taiwan  
Tel. 886/2.2642.9199  
Fax 886/2.2642.9099

## Software License Agreement

BY USING THE FISHFINDER 160C, YOU AGREE TO BE BOUND BY THE TERMS AND CONDITIONS OF THE FOLLOWING SOFTWARE LICENSE AGREEMENT. PLEASE READ THIS AGREEMENT CAREFULLY.

Garmin grants you a limited license to use the software embedded in this device (the “Software”) in binary executable form in the normal operation of the product. Title, ownership rights, and intellectual property rights in and to the Software remain in Garmin.

You acknowledge that the Software is the property of Garmin and is protected under the United States of America copyright laws and international copyright treaties. You further acknowledge that the structure, organization, and code of the Software are valuable trade secrets of Garmin and that the Software in source code form remains a valuable trade secret of Garmin. You agree not to decompile, disassemble, modify, reverse assemble, reverse engineer, or reduce to human readable form the Software or any part thereof or create any derivative works based on the Software. You agree not to export or re-export the Software to any country in violation of the export control laws of the United States of America.

## Declaration of Conformity (DoC)

Hereby, Garmin, declares that this Fishfinder 160C is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.

To view the full Declaration of Conformity, see the Garmin Web site for your Garmin product: <http://www.garmin.com/products/ff160c/>. Click **Manuals**, and then select the **Declaration of Conformity** link.

# INDEX

## A

adjustment bar, the 14  
alarms 15  
arches 2  
arrow keys 12  
auto gain 13, 17

## B

background 18  
battery 15, 18  
    battery alarm 15  
    battery voltage 13  
beam 2, 17  
beeper 21  
bottom  
    of the water 2  
    shape and type 13

## C

calibrate speed 19  
change  
    a setting 14  
    a setup menu item 15  
cleaning  
    the case iii  
    the screen iii

clutter 2  
color 1  
contrast 21

## D

Declaration of Conformity 24  
deep alarm 16  
defaults 21  
depth 20  
distance 13, 18, 20  
dual beam 2

## E

electrical system 10  
ENTER key 12

## F

features i  
fish 13. *See also* suspended targets  
    alarm 16  
    ID 16  
    symbols 2, 16

## G

gain 2, 14  
graph 16

## I

installing  
    the transducer 6  
    the unit 5  
    the wiring harness 10

## K

keel offset 18

## L

language 20  
light 21

## M

MENU key 12  
mounting  
    the bracket assembly 5  
    the transducer 8, 9

## N

narrow beam 2, 17  
NMEA 10  
    output 21  
numbers 18

## O

operating instructions 12

## P

packing list 4  
physical specifications 22  
power/backlight key 12

## R

range 14  
reset  
    defaults 21  
    distance 20

## S

scroll 14  
setup menu 15  
shallow alarm 16  
simulator mode 12, 20  
size (numbers) 18  
Software License Agreement 24  
sonar 1, 22  
sound waves 1  
specifications 22  
speed 13, 18, 20  
storage iii  
strongest sonar returns 1  
surface clutter 2  
suspended targets 2, 13  
system 20

**T**

- temperature [20](#)
- testing the transom mount installation [10](#)
- thermoclines [3](#)
  - and structure [13](#)
- tool list [5](#)
- transducer [1](#)
  - assembling [6](#)
  - installing [6, 9](#)
  - mounting on a transom [8](#)
  - mounting on a trolling motor [9](#)
- transom
  - mount installation [10](#)
  - selecting a mount location [7](#)
- trolling motor
  - mounting the transducer [9](#)

**U**

- understanding sonar [1](#)
- units [20](#)
- unit installation [5](#)

**V**

- view [15](#)

**W**

- water
  - depth [13](#)
  - temperature [3, 13, 18](#)
- weakest returns [1](#)
- whiteline [3, 17](#)
- wide beam [2, 17](#)
- wiring
  - diagram [11](#)
  - harness installation [10](#)
  - to a fuse block [11](#)

**Z**

- zoom [15](#)







© Copyright 2006 Garmin Ltd. or its subsidiaries

Garmin International, Inc.  
1200 East 151<sup>st</sup> Street, Olathe, Kansas 66062, USA

Garmin (Europe) Ltd.  
Unit 5, The Quadrangle, Abbey Park Industrial Estate, Romsey, SO51 9DL, UK

Garmin Corporation  
No. 68, Jangshu 2<sup>nd</sup> Road, Shijr, Taipei County, Taiwan

[www.garmin.com](http://www.garmin.com)

Part Number 190-00532-00 Rev. C